

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Miller et al.
Serial No. : 10/669,116
Filed : September 23, 2003
For : Implantable Current Collector
 ID Matrix Identifier
Examiner : A. Echelmeyer
Group Art Unit : 1745

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF UNDER 37 CFR 1.193(B) (1)

Sir:

In response to the Examiner's Answer dated December 19,
2007, the Applicants remark as follows:

REMARKS

The examiner disagrees with the applicants' contention that one having ordinary skill in the art would not have been motivated to improve upon Miyazuki et al. because this reference describes improved technology and there is no reason to further improve the improvement. Instead, the examiner believes that Miyazuki et al. is an ineffective teaching for making a current collector with markings and the like comprising relevant information.

In the examiner's opinion, one skilled in the art would have recognized that etching a current collector with relevant information is a superior technique to Miyazuki et al. because "etching can be performed at any stage in the manufacturing process, not only when the active material is being applied, thus allowing more flexibility in the manufacturing process and allowing for important information to be provided before the active material is applied, if necessary. Etching also offers advantages over active material deposition because it is not susceptible to damage, since one of ordinary skill in the art would recognize that active material may be consumed during the operation of the battery, and that active material may be removed from the plate (see, for example, Fig. 6 of Miyazuki et al.)."

First, it is true that etching can be performed at any stage in the manufacturing process provided it's done on a portion of the current collector that doesn't support active material if a characteristic of the active material is part of the relevant information. Secondly, etching is also not susceptible to damage as active material manipulation

according to Miyazuki et al. might be. The applicants alluded to this in their application; etching does not suffer from degradation during cell discharge while printed identification marks might become a potential source of contamination by dissolving in the electrolyte system (page 8, lines 1 to 3 of the specification).

Thirdly, to point out that active material is consumed during cell discharge is a mischaracterization of the reference. Miyazuki et al. relates to secondary batteries. Suitable lithiated materials for the cathode are listed at column 10, lines 13 to 22. Suitable anode materials are listed at column 10, lines 23 to 36 including various carbonaceous materials. Secondary or rechargeable cells are typically referred to "rocking chair" cells because lithium ions "rock" back and forth from the cathode to the anode and back to the cathode as the cell cycles between a charged and discharged state. These types of cells are typically built in a discharged state with the lithium beginning in the cathode position. In any event, the respective materials at both the cathode and anode positions that intercalate and de-intercalate lithium remain in place as the cell is cycled. Only lithium ions move back and forth. This is important because, contrary to the examiner's assertion, it means that active material is not actually consumed during cell cycling. Any identification marks in the carbonaceous anode material or the metallic cathode material will remain throughout cycling as lithium ions "rock" back and forth.

Finally, the examiner's last point references Fig. 6 of the Miyazui et al. patent. This reference to the prior art drawing figure is another example of trying to find fault where none exists. It is noted that at column 7, line 50 to

column 8, line 4, Miyazuki et al. state that the active material portion 3a impregnated with the solidifying agent is peeled off by an "appropriate means". Such peeling, or "active material removal" in the examiner's words, is exactly what Miyazuki et al. intended. Therefore, speculating as to the possible shortcomings of Miyazuki et al. in order to dovetail Merlin et al. onto the string of cited prior art is only possible through hindsight reasoning.

Webster's dictionary defines the word "hindsight" as: perception of the nature and demands of an event after it has happened. These are exactly the glasses the examiner is wearing in her continued rejection of the pending claims predicated on Miyazuki et al.'s ineffectiveness. Since Miyazuki et al. doesn't "demand" improvement, the examiner is characterizing reference to Merlin et al.'s laser etching to reject the present invention as one of an obvious "nature". Even though Miyazuki et al. didn't state in their patent that their invention was ineffective, because of course they wouldn't, the ineffectiveness in their solution is so glaring as to demand improvement. Anyone skilled in the art could easily see that, which then gives ample motivation to look to Merlin et al.

As an improvement on the then existing prior art, Miyazuki et al. had no reason to acknowledge any shortcomings that may have existed in their invention. That is because Miyazuki et al. believed they had a complete, functional invention, not a non-functional, "ineffective" one. It is likely the rare exception where an applicant would admit the shortcomings or deficiencies in their invention, particularly at the application stage. Instead, inventors generally want

to put their best foot forward in an attempt to favorably convince the examiner and gain allowance of their application.

The examiner acknowledges this when she says that "[p]ossible reasons that one of ordinary skill in the art might be motivated to improve upon a reference, including that the reference is ineffective. Applicant further states that there is no indication that Miyazuki et al. is ineffective (page 16). This argument is not convincing, since an invention does not need to be ineffective in order to be improved. A reference is unlikely to disclose the shortcomings of the invention, even if those shortcomings are known by the inventor."

In that light, the examiner admits that there is no indication of any ineffectiveness in Miyazuki et al. Nonetheless, in the examiner's opinion it was obvious to improve upon Miyazuki et al. In the summation paragraph of the Examiner's Answer it is stated "that one of ordinary skill in the art would recognize that Miyazuki et al. could be improved upon, and that one of an ordinary skill in the art would be motivated to improve on Miyazuki et al. by forming the identification marks using etching, as taught by Lessar et al. [Merlin et al.], instead of active material since the etching could be performed at any stage during production and since the etching would be less susceptible to damage."

As already discussed, the first portion of that statement is not entirely accurate. As set forth in independent claim 1, for example, the etched identification marks can relate to the gram amount of electrode active material supported on the current collector, among other relevant battery parameters. While there is flexibility in the manufacturing process, the etched marks preferably come after the active material is

supported on the current collector. More importantly, however, the applicants take exception with the latter part of the answer's summation regarding the level of motivation of one skilled in the art. It would be one thing if Merlin et al. was etching something to do with a battery. Instead, they teach laser etching the connector of a chip card, bank card, telephone card, and the like. This has already been explained in each of the applicants' prior submissions. Not only would one skilled in the art have to first realize that Miyazuki et al. needed improvement, even though there's no indication of that, but they would have to then decide it was best to look outside the battery arts to the chip card arts and then finally realize that a patent teaching laser etching in a totally unrelated art for an unrelated purpose could be used to improve a process [Miyazuki et al.] that likely required no improvement.

In the recent Supreme Court decision, *KSR International Co. v. Teleflex Inc. et al.*, 550 U.S. ____ (2007), the court pointed out several flaws in the Court of Appeals' analysis of the "teaching, suggestion, or motivation" (TSM) test. The first error was to hold that courts and patent examiners should look only to the problem the patentee was trying to solve. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." (Page 16 - emphasis added). This is directly on point with the applicant's position. A careful review of the Lessar et al. patent in view of Miyazuki et al. does not reveal any need or problem. Furthermore, Merlin et al. is not in the relevant field. Batteries are far removed from the credit card arts. In KSR, the Court stated

that Asano's primary purpose was to provide an adjustable pedal with a fixed pivot point "and the prior art was replete with patents indicating that a fixed point was an ideal mount for a sensor." (Refer to page 17 of the opinion.) In that light, the KSR decision is predicted on the overturning of Teleflex's patent based on a combination of known art in closely related fields. That is simply not the case in the present invention.

For at least that reason, the applicants believe they are entitled to a reconsideration of the examiner's opinion and an allowance of the pending claims.

Respectfully submitted,



Michael F. Scalise
Reg. No. 34,920

Greatbatch, Inc.
10,000 Wehrle Drive
Clarence, New York 14031
716-759-5810
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